FW: BASF Restores Fish Habitat in the Trenton Channel of the Detroit River_AO MDEQ

Ostaszewski, Arthur (DEQ) to: Marc Tuchman, Juan Thomas, Conforti, Rich (DEQ), Slayton, David (DEQ) 10/16/2009 10:33 AM

Cc: ostaszea.michigan.gov

FYI,
Marc and Juan, there is a name of a BASF PR person in the first PDF that may have a more receptive ear for a GLLA project that includes Northworks than the folks we have been dealing with so far...

AO

From: John_Hartig@fws.gov [mailto:John_Hartig@fws.gov]
Sent: Thursday, October 15, 2009 1:26 PM
Subject: BASF Restores Fish Habitat in the Trenton Channel of the Detroit River

To: Refuge Partners
From: John Hartig

Subject: BASF Restores Fish Habitat in the Trenton Channel of the Detroit River

We have another great restoration accpmplishment for the Detroit River. BASF has restored one acre of lake sturgeon, walleye, and bass habitat in the Trenton Channel of the Detroit River. See attached news release and associated fact sheet. Many thanks to BASF for their leadership in environmental stewardship and conservation.

(See attached file: BASF Riverview Oct. 09.pdf)

(See attached file: BASFsite_HabRestor_final_14Oct09.pdf)

John H. Hartig, Refuge Manager
Detroit River International Wildlife Refuge
Large Lakes Research Station
9311 Groh Road
Grosse Ile, MI 48138
Phone: 734-692-7608
Fax: 734-692-7603
E-mail: john_hartig@fws.gov

Build It and They Will Come...

Restoration of Fish Spawning Habitat in the Detroit

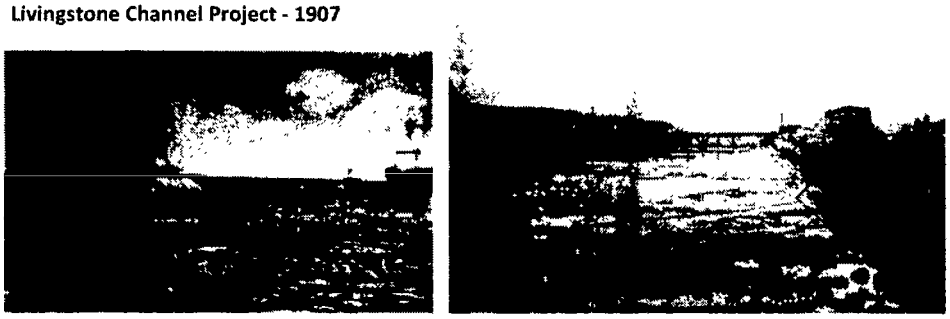
Huron-Erie Corridor (HEC) waters flow from southern Lake Huron into the St. Clair River, Lake St. Clair, Detroit River and western Lake Erie. Substantial improvement of environmental quality over the past three decades has resulted in a stronger and more productive fishery in the HEC. Fishery scientists have documented the recovery of walleye from crisis levels in the 1970s and a return of lake sturgeon and lake whitefish after several decades of absence.

Why Build Spawning Habitat?

Scientists working in the HEC have found that fish have fewer places to spawn than in the past, primarily due to the removal of limestone rock from the rivers in the HEC over the last century. Scientists and resource managers are looking for ways to restore fish habitat and native fish communities and create a healthier ecosystem. Building spawning habitat is an effective approach being used to address this need in the Detroit River and within the Detroit River International Wildlife Refuge.

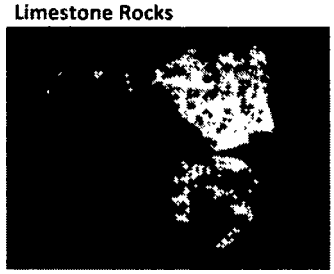
What Happened to the Spawning Habitat?

Livingstone Channel Project - 1907



Channel construction in the Detroit River resulted in the removal of the limestone rock/cobble where fish spawned, and altered river flow.

Limestone Rocks



Fish such as walleye, lake whitefish, and lake sturgeon disperse their eggs over "honey-comb" limestone rock on the river bottom. Depressions in the rock protect fish eggs as they mature.

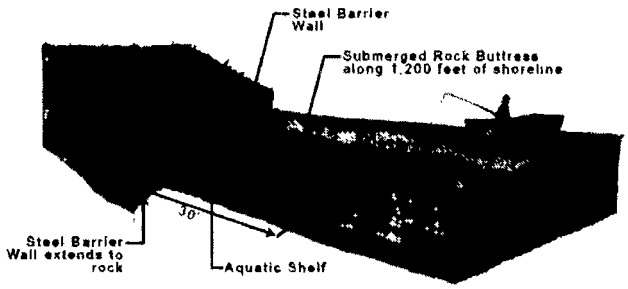
How Can We Improve Fish Spawning Habitat in the Detroit River?

One way is to build new habitat. Scientists know that fish need certain types of habitat for spawning such as limestone rock (see above). BASF Corporation recently constructed nearly one acre of spawning habitat through construction of an aquatic shelf (below right) to enhance native fish reproduction. In 2009, lake sturgeon and walleye were found at the newly constructed habitat!

BASF Riverview Site Construction

In 2008, BASF Corporation constructed fish spawning habitat as part of a remediation project in the Trenton Channel in the Detroit River at Riverview, Michigan.

Creating an Aquatic Shelf in the Detroit River



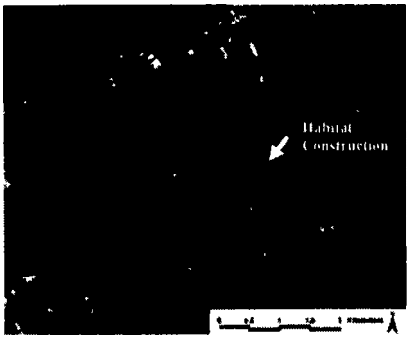
1. Small fish live and hide among the rocks of the aquatic shelf.

2. Larger fish come to the shelf to lay eggs much to the delight of sport fishermen

3. The aquatic shelf serves as a spawning ground, nursery, feeding site and an underwater refuge for sturgeon, bass, walleye, and other aquatic life.

Restoring Fish Spawning Habitat in the Detroit River

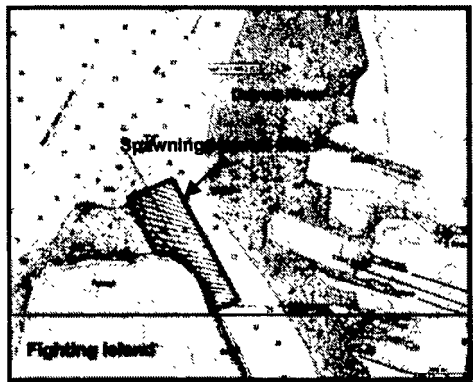
Belle Isle Lake Sturgeon Spawning Habitat Construction - 2004



In 2004, spawning reefs were constructed in the waters off Belle Isle in the Detroit River with funding from Great Lakes Fishery Trust, MDEQ, and DTE Energy, and support from a consortium of federal, state and private groups. The constructed spawning reefs have greatly enhanced fish use of the area and have directly enhanced reproduction by 14 native fish species. Before construction of the spawning reefs only two species of fish were collected in the study area. After construction, 20 species of fish were collected there, including 14 native fish species. Restoration of this spawning habitat has enhanced fish reproduction and improved understanding of the fish community.

'Fighting Island' Spawning Habitat Construction - 2008

Construction was completed in October 2008. Lake sturgeon, walleye, lake whitefish and other native fish have spawned on the newly constructed habitat! This was the first binationally funded project in the Detroit River International Wildlife Refuge. Post-construction habitat assessment will continue in future years to document use of the reefs by spawning fish and enhancement of this valuable fishery.



Fighting Island Partners include: Environment Canada, U.S. Fish and Wildlife Service, Essex Region Conservation Authority, U.S. Geological Survey-Great Lakes Science Center, Michigan Wildlife Conservancy, Ontario Ministry of Natural Resources, National Fish and Wildlife Foundation, Detroit River Canadian Cleanup, BASF Corporation, DTE Energy, Landmark Engineers Inc., International Wildlife Refuge Alliance, Michigan Department of Natural Resources, Michigan Sea Grant, and Wildlife Habitat Council.

A Healthier Detroit River

Pollution prevention and cleanup of the Detroit River by the U.S. and Canada and continued scientific research have contributed to the continuing progress toward the ecological recovery and revitalization of this International Heritage River System.

Kayakers on Trenton Channel, Detroit River International Wildlife Refuge. (Photo by USGS)

Scientists catch walleye, Detroit River (Photo by USFWS)

Angler on Detroit River. (Photo by Michigan DNR)

Young angler. (Photo by Michigan DNR)

Angler catches lake whitefish, Detroit River. (Photo by Mike Zielinski)

If We Build It, Will They Come?

Effective management and sound science practices will increase the chance of successful fish spawning habitat construction and restoration, but collaboration is also crucial to success. Private citizens, industry, non-governmental organizations, and state, tribal, federal, and local governments in the U.S. and Canada are working together to reach our fish habitat restoration goals for the Detroit River and the entire HEC.

Contact Information:

Maureen Paukert, BASF Corporation
Email: maureen.paukert@basf.com Website: www.basf.com

Dr. John Hartig, Refuge Manager, Detroit River International Wildlife Refuge
Email: john_hartig@fws.gov Website: www.fws.gov/midwest/DetroitRiver

Dr. Bruce Manny, USGS Great Lakes Science Center
Email: bmanny@usgs.gov Website: www.glsc.usgs.gov

BASF

NATIONAL WILDLIFE REFUGE SYSTEM

USGS
science for a changing world

Michael J Gerdenich <michael.gerdenich@basf.com>

To

01/30/2007 03:38 PM

Subject BASF Wyandotte North Works CA Update Meeting

History: This message has been replied to and forwarded.

Good Afternoon Juan:

With your concurrence, BASF would like to meet with you at your office to discuss BASF's North Works CA program. We can be there on Tuesday February 27th or Wednesday February 28th; our preferred date and time is the 27th at 10:00. Proposed agenda topics include:

- Presentation of the BASF Wyandotte - North Works facilities expansion projects and a discussion of their impacts to the RCRA CMS.
- Update of activities completed since the April 2006 meeting between USEPA and BASF or currently underway.
- Presentation of preliminary tier II human health and screening level ecological risk assessment findings.
- Discussion of remaining RCRA CMS elements and schedule for completion.

Thank you Juan. I am looking forward to meeting you and discussing BASF's North Works CA efforts.

Mike

Michael Gerdenich
EHS Remediation Team Member

Phone: (734) 324-6298
Mobile: (734) 365-9573
Fax: (734) 324-6401
BASF Corporation
1609 Biddle Avenue
Wyandotte, MI 48192

BASF - The Chemical Company

Carolyn Bury /R5/USEPA/US
05/15/2006 09:09 AM

To Bruce D Roberts <bruce.roberts@basf.com>
cc Juan Thomas/R5/USEPA/US@EPA, rwellis@ensr.com, Bhooma Sundar/R5/USEPA/US@EPA
bcc
Subject Re: MEETING NOTES

Bruce-
Please see attached file for some changes on the eco-related discussion at the April project meeting.
Carolyn

Carolyn Bury
Environmental Scientist
RCRA Corrective Action
U.S. EPA Region Five
77 W. Jackson Blvd. DE-9J
Chicago, IL 60604
312-886-3020
bury.carolyn@epa.gov

-----Bruce D Roberts <bruce.roberts@basf.com> wrote: -----

To: Carolyn Bury/R5/USEPA/US@EPA
From: Bruce D Roberts <bruce.roberts@basf.com>
Date: 05/12/2006 10:44AM
cc: Juan Thomas/R5/USEPA/US@EPA, rwellis@ensr.com
Subject: MEETING NOTES

Carolyn,

Below are portions of your revised notes and my new proposed wording.

Please advise if the new proposed wording is acceptable. If not, please revise.

Thanks.

Risk assessments (beginning with 2nd paragraph)

EPA noted that based on a description of the site and the aerial photo there doesn't appear to be terrestrial habitat on the site. didn?t show any trees onsite that would provide habitat for wildlife, However, if 40 acres of trees are planted and irrigation ditches are constructed, terrestrial and aquatic habitat would be created. , but that The ecological risk assessment screening should take this into account. if large stands of trees will be planted onsite in the future. EPA also noted that both human and ecological risks need to be evaluated for the firewater pond.

BASF new proposed wording

EPA noted that based on a description of the site and the aerial photo there doesn't appear to be terrestrial habitat on the site. didn?t show any trees onsite that would provide habitat for wildlife, However, if 40 acres of trees are planted are constructed, terrestrial habitat would be created. , but that The ecological risk assessment screening should take this into account. if large stands of trees will be planted onsite in the

future. EPA also noted that both human and ecological risks need to be evaluated for the firewater pond.

CAOs

EPA commented that BASF?s Corrective Action Objective (CAO) for COCs in site groundwater does not need to address ecological risks, as ecological risk criteria do not apply to groundwater. EPA also commented that the CAO regarding human exposure to COC in site soil does not need to address ecological risks. EPA offered to provide revised Corrective Action Objectives to BASF for consideration.

This doesn't appear to be accurate. The discussion was about screening groundwater against Region 5 eco-screeing values. I recall saying that groundwater itself does not have screening threshold values, unlike other exposure media. Groundwater discharge to surface water is of ecological concern for benthic, epibenthic, and open water receptors, and these potential exposure areas should be addressed in the concetpual site model and risk assessment, and CAOs.

BASF new proposed wording

EPA commented that BASF?s Corrective Action Objective (CAO) ?Prevent exposure to COC in site groundwater in excess of applicable human health or ecological risk-based levels? is not accurate as groundwater itself does not have ecological screening threshold values. However, the ecological risk screening should address groundwater discharges to surface water where benthic, epibenthic and open-water receptors could be exposed to COCs from the groundwater. EPA also commented that the CAO regarding human exposure and ecological risks in site soil needs to be separated into two separate CAOs; one for human exposure and one for ecological risks. EPA offered to provide revised Corrective Action Objectives to BASF for consideration

meeting minute changes from epa 5-15-06 wpd

EPA suggested proposal (modified version of BASF)

draft cbury 4/11/06

Draft Corrective Action Objectives BASF

I. Take measures to protect the Detroit River from discharges of groundwater which is contaminated in excess of applicable human-health or ecological risk-based levels, e.g., Part 201 mixing zone criteria, generic or site-specific GSI criteria.

II. Take measures to protect the fauna of the Detroit River from contamination in sediments in excess of site-specific risk-based concentrations. **

III. Take measures to protect human exposure to contamination in sediments in the Detroit River in excess of Part 201 criteria. **

IV. Prevent exposure to COCs in groundwater in excess of applicable human health risk-based levels, e.g., Part 201 industrial and commercial criteria, or a calculated risk-based exposure.

V. Take measures to protect ecological exposure to (other site) surface water in excess of water quality criteria.

VI. Take measures to protect humans from exposure to contaminated soils in excess of applicable levels, e.g., Part 201 industrial and commercial criteria, or a calculated risk-based exposure.

VII. Take measures to protect ecological exposures to contaminated soils in excess of site-specific risk-base levels.

Do we want to (generally) clean the groundwater, too? Should we have a CAO for that?

**to become a CAO if sediments are found in the impending sampling event to determine the presence of sediments.

AUG 17 1994

HRE-8J

Mr. Mike DeCapita
Endangered Species Coordinator
U.S. Fish and Wildlife Service
East Lansing Field Office
1405 South Harrison Road
Room 302
East Lansing, Michigan 48823

RE: §7 Endangered Species Act
Listed Species Screening
BASF Corporation
Wyandotte, Michigan
MID 064 197 742

Dear Mr. DeCapita:

Under an Administrative Order on Consent, the United States Environmental Protection Agency (U.S. EPA), is requiring BASF Corporation to conduct corrective action under the Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) at the North Works plant. BASF Corporation's North Works is located in Wayne County and can be found at Township 3S Range 11E in parts of Sections 21 and 28 of the Wyandotte Quadrangle, United States Geological Survey (USGS) topographic map.

According to Section 7 of the Endangered Species Act (ESA), the Fish and Wildlife Service (FWS) of the U.S. Department of Interior must be contacted regarding the status of protected species and their critical habitats prior to a Federal Agency action. The imposition of corrective action by the U.S. EPA on BASF Corporation constitutes such an action. As a result, the U.S. EPA is requesting information regarding protected species and their critical habitats in the proximity of the corrective action. Additionally, as a private entity, BASF Corporation has responsibilities under Section 9 of the ESA not to affect listed species.

BASF Corporation has submitted a RCRA Facility Investigation workplan and will be conducting a screening-level evaluation to determine whether there are any ESA issues associated with the pending corrective action. Accordingly, the purpose of this letter is to solicit information from the FWS concerning the occurrence of any endangered, threatened, proposed, or candidate species or

their critical habitats in the proximity of the area associated with the pending corrective action. Since the FWS is the recognized authority concerning protected species and their critical habitats, U.S. EPA and BASF Corporation is leaving open, to FWS interpretation, the geographic area of concern. To aid the FWS in this determination, enclosed with this letter is a summary of the known nature and extent of contamination and a summary of the investigation activities that could accompany the pending corrective action. Also enclosed is a copy of the Wyandotte Quadrangle map on which the area of corrective action activities is highlighted.

If there are any occurrences, U.S. EPA requests that the FWS determine whether an affect would, would not, or might be anticipated for each occurrence. U.S. EPA will not direct BASF Corporation to investigate any further at this time, those occurrences that would not be anticipated by the FWS to be definitely or potentially affected by the corrective action. If the FWS determines that an endangered, threatened, or proposed species or its critical habitat would or might be affected by the pending corrective action, the U.S. EPA and FWS will decide whether BASF Corporation will be required to conduct a biological assessment. The objective of the biological assessment would be to determine the potential magnitude of affect that the corrective action would have on the protected species or their critical habitats. Additionally, the U.S. EPA might enter into either informal or formal consultation with the FWS. **Please note that corrective action is a multi-phased project involving multiple U.S. EPA approvals over a year or more. FWS identification of proposed and candidate species relative to this type of project is critical to ensure that species protection goals are met.**

Please send all correspondences concerning this matter to the U.S. EPA Project Manager, Diane Sharrow, and Adam Bickel of BASF Corporation. Additionally, please send a copy of all correspondences to the ESA Coordinator for the Office of RCRA, Diane Sharrow. My address appears on the letterhead of this letter, whereas the address of the BASF Corporation is as follows:

1609 Biddle Avenue
Wyandotte, Michigan 48192

If you have any questions regarding this matter, you can contact me at (312) 886-6199.

Respectfully,

Diane M. Sharrow
Environmental Scientist

Enclosures

cc: A. Bickel, BASF
D. Sharrow, REB